

Claims

What is claimed is:

1. A method of providing a group of reachable nodes of a communications environment, said communications environment including a plurality of networks, and said method comprising:

dynamically determining a group of reachable nodes of said communications environment, said group of reachable nodes including one or more nodes of the communications environment that can communicate with one another via a same network of the plurality of networks; and

making available to one or more nodes of the communications environment an indication of the group of reachable nodes.

2. The method of claim 1, wherein said group of reachable nodes comprises a largest set of reachable nodes that can communicate with one another via a same network.

3. The method of claim 1, wherein said dynamically determining comprises ascertaining, by each node of one or more nodes of said communications environment, whether said node is to be a member of said group.

4. The method of claim 3, wherein said ascertaining comprises:

determining a network of said plurality of networks having a largest set of nodes that can communicate with one another via that network; and

determining a status of a component associated with the network determined to have a largest set of nodes, wherein the ascertaining of whether the node is to be a member of the group is based at least in part on the status.

5. The method of claim 4, wherein said component comprises a network adapter of said node.

6. The method of claim 5, wherein said node is to be a member of said group of reachable nodes when said network adapter has an up status.

7. The method of claim 3, wherein the one or more ascertaining nodes includes one or more nodes notified of a prespecified event.

8. The method of claim 7, wherein said prespecified event comprises a change in membership of a network group of said communications environment.

9. The method of claim 1, wherein said making available the indication of the group of reachable nodes comprises providing a globally consistent view of the group of reachable nodes to one or more nodes of said communications environment.

10. The method of claim 9, wherein the one or more nodes provided the globally consistent view comprises one or more nodes that subscribe to one or more changes associated with the group of reachable nodes.

11. The method of claim 1, wherein said dynamically determining is performed in response to a predefined event.

12. The method of claim 11, wherein said predefined event includes a change in membership of a network group of said communications environment.

13. The method of claim 12, wherein said change in membership of said network group is in response to a change in status of an adapter associated with said network group.

14. A method of determining a group of reachable nodes of a communications environment, said communications environment including a plurality of nodes, wherein each node of at least a subset of the plurality of nodes is coupled to a plurality of networks, said method comprising:

detecting a status change of a network adapter of a network of said plurality of networks;

performing an action, in response to the status change, that affects a network group associated with the network; and

determining, in response to affecting the network group, membership in a group of reachable nodes.

15. The method of claim 14, wherein said performing an action comprises having a process of a node coupled to the network adapter with the status change join or leave the network group.

16. The method of claim 14, wherein said determining comprises ascertaining, by each node of one or more nodes of said communications environment, whether said node is to be a member of said group.

17. The method of claim 16, wherein said ascertaining comprises:

determining a network of said plurality of networks having a largest set of nodes that can communicate with one another via that network; and

determining a status of a component associated with the network determined to have a largest set of nodes, wherein the ascertaining of whether the node is to be a member of the group is based at least in part on the status.

18. The method of claim 17, wherein said component comprises an adapter of said node.

19. The method of claim 18, wherein said node is to be a member of said group of reachable nodes when said adapter has an up status.

20. The method of claim 16, wherein the one or more ascertaining nodes comprises one or more nodes notified of the affect on the network group.

21. The method of claim 14, wherein the group of reachable nodes comprises a largest set of reachable nodes that can communicate with one another via a same network.

22. The method of claim 14, further comprising providing to one or more nodes of said communications environment a globally consistent view of said group of reachable nodes.

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23. A method of providing a desired group of nodes of a communications environment, said communications environment comprising a plurality of nodes, wherein each node of at least a subset of said plurality of nodes is coupled to a plurality of networks, and wherein said method comprises:

determining a group of one or more nodes of said communications environment, said group representing a network of said plurality of networks having a largest number of nodes that can communicate with one another via the network relative to one or more other networks of said plurality of networks; and

providing a globally consistent view of said group.

24. The method of claim 23, wherein said providing comprises providing said globally consistent view to one or more nodes of said communications environment indicating a desire to be notified of one or more changes to said group.

25. The method of claim 23, wherein said determining is performed in response to a predefined event.

26. The method of claim 25, wherein said predefined event includes a change in membership of a network group of said communications environment.

27. The method of claim 26, wherein said change in membership of said network group is in response to a change in status of an adapter associated with said network group.

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28. A system of providing a group of reachable nodes of a communications environment, said communications environment including a plurality of networks, and said system comprising:

means for dynamically determining a group of reachable nodes of said communications environment, said group of reachable nodes including one or more nodes of the communications environment that can communicate with one another via a same network of the plurality of networks; and

means for making available to one or more nodes of the communications environment an indication of the group of reachable nodes.

29. The system of claim 28, wherein said group of reachable nodes comprises a largest set of reachable nodes that can communicate with one another via a same network.

30. The system of claim 28, wherein said means for dynamically determining comprises means for ascertaining, by each node of one or more nodes of said communications environment, whether said node is to be a member of said group.

31. The system of claim 30, wherein said means for ascertaining comprises:

means for determining a network of said plurality of networks having a largest set of nodes that can communicate with one another via that network; and

means for determining a status of a component associated with the network determined to have a largest set of nodes, wherein the ascertaining of whether the node is to be a member of the group is based at least in part on the status.

32. The system of claim 31, wherein said component comprises a network adapter of said node.

33. The system of claim 32, wherein said node is to be a member of said group of reachable nodes when said network adapter has an up status.

34. The system of claim 30, wherein the one or more ascertaining nodes includes one or more nodes notified of a prespecified event.

35. The system of claim 34, wherein said prespecified event comprises a change in membership of a network group of said communications environment.

36. The system of claim 28, wherein said means for making available the indication of the group of reachable nodes comprises means for providing a globally consistent view of the group of reachable nodes to one or more nodes of said communications environment.

37. The system of claim 36, wherein the one or more nodes provided the globally consistent view comprises one or more nodes that subscribe to one or more changes associated with the group of reachable nodes.

38. The system of claim 28, wherein the dynamically determining is performed in response to a predefined event.

39. The system of claim 38, wherein said predefined event includes a change in membership of a network group of said communications environment.

40. The system of claim 39, wherein said change in membership of said network group is in response to a change in status of an adapter associated with said network group.

41. A system of determining a group of reachable nodes of a communications environment, said communications environment including a plurality of nodes, wherein each node of at least a subset of the plurality of nodes is coupled to a plurality of networks, said system comprising:

means for detecting a status change of a network adapter of a network of said plurality of networks;

means for performing an action, in response to the status change, that affects a network group associated with the network; and

means for determining, in response to affecting the network group, membership in a group of reachable nodes.

42. The system of claim 41, wherein said means for performing an action comprises means for having a process of a node coupled to the network adapter with the status change join or leave the network group.

43. The system of claim 41, wherein said means for determining comprises means for ascertaining, by each node of one or more nodes of said communications environment, whether said node is to be a member of said group.

44. The system of claim 43, wherein said means for ascertaining comprises:

means for determining a network of said plurality of networks having a largest set of nodes that can communicate with one another via that network; and

means for determining a status of a component associated with the network determined to have a largest set of nodes, wherein the ascertaining of whether the node is to be a member of the group is based at least in part on the status.

45. The system of claim 44, wherein said component comprises an adapter of said node.

46. The system of claim 45, wherein said node is to be a member of said group of reachable nodes when said adapter has an up status.

47. The system of claim 44, wherein the one or more ascertaining nodes comprises one or more nodes notified of the affect on the network group.

48. The system of claim 41, wherein the group of reachable nodes comprises a largest set of reachable nodes that can communicate with one another via a same network.

49. The system of claim 41, further comprising means for providing to one or more nodes of said communications environment a globally consistent view of said group of reachable nodes.

50. A system of providing a desired group of nodes of a communications environment, said communications environment comprising a plurality of nodes, wherein each node of at least a subset of said plurality of nodes is coupled to a plurality of networks, and wherein said system comprises:

means for determining a group of one or more nodes of said communications environment, said group representing a network of said plurality of networks having a largest number of nodes that can communicate with one another via the network relative to one or more other networks of said plurality of networks; and

means for providing a globally consistent view of said group.

51. The system of claim 50, wherein said means for providing comprises means for providing said globally consistent view to one or more nodes of said communications environment indicating a desire to be notified of one or more changes to said group.

52. The system of claim 50, wherein the determining is performed in response to a predefined event.

53. The system of claim 52, wherein said predefined event includes a change in membership of a network group of said communications environment.

54. The system of claim 53, wherein said change in membership of said network group is in response to a change in status of an adapter associated with said network group.

55. A system of providing a group of reachable nodes of a communications environment, said communications environment including a plurality of networks, and said system comprising:

at least one node adapted to dynamically determine a group of reachable nodes of said communications environment, said group of reachable nodes including one or more nodes of the communications environment that can communicate with one another via a same network of the plurality of networks; and

an indication of the group of reachable nodes provided to one or more nodes of the communications environment.

56. A system of determining a group of reachable nodes of a communications environment, said communications environment including a plurality of nodes, wherein each node of at least a subset of the plurality of nodes is coupled to a plurality of networks, said system comprising:

a network adapter of a network of said plurality of networks, said network adapter having a status change;

a network group associated with the network affected by the status change; and

membership in a group of reachable nodes, wherein membership in said group is determined in response to affecting the network group.

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57. A system of providing a desired group of nodes of a communications environment, said communications environment comprising a plurality of nodes, wherein each node of at least a subset of said plurality of nodes is coupled to a plurality of networks, and wherein said system comprises:

a group of one or more nodes of said communications environment, said group representing a network of said plurality of networks having a largest number of nodes that can communicate with one another via the network relative to one or more other networks of said plurality of networks; and

a globally consistent view of said group.

58. At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of providing a group of reachable nodes of a communications environment, said communications environment including a plurality of networks, and said method comprising:

dynamically determining a group of reachable nodes of said communications environment, said group of reachable nodes including one or more nodes of the communications environment that can communicate with one another via a same network of the plurality of networks; and

making available to one or more nodes of the communications environment an indication of the group of reachable nodes.

59. The at least one program storage device of claim 58, wherein said group of reachable nodes comprises a largest set of reachable nodes that can communicate with one another via a same network.

60. The at least one program storage device of claim 58, wherein said dynamically determining comprises ascertaining, by each node of one or more nodes of said communications environment, whether said node is to be a member of said group.

61. The at least one program storage device of claim 60, wherein said ascertaining comprises:

determining a network of said plurality of networks having a largest set of nodes that can communicate with one another via that network; and

determining a status of a component associated with the network determined to have a largest set of nodes, wherein the ascertaining of whether the node is to be a member of the group is based at least in part on the status.

62. The at least one program storage device of claim 61, wherein said component comprises a network adapter of said node.

63. The at least one program storage device of claim 62, wherein said node is to be a member of said group of reachable nodes when said network adapter has an up status.

64. The at least one program storage device of claim 60, wherein the one or more ascertaining nodes includes one or more nodes notified of a prespecified event.

65. The at least one program storage device of claim 64, wherein said prespecified event comprises a change in membership of a network group of said communications environment.

66. The at least one program storage device of claim 58, wherein said making available the indication of the group of reachable nodes comprises providing a globally consistent view of the group of reachable nodes to one or more nodes of said communications environment.

67. The at least one program storage device of claim 66, wherein the one or more nodes provided the globally consistent view comprises one or more nodes that subscribe to one or more changes associated with the group of reachable nodes.

68. The at least one program storage device of claim 58, wherein said dynamically determining is performed in response to a predefined event.

69. The at least one program storage device of claim 68, wherein said predefined event includes a change in membership of a network group of said communications environment.

70. The at least one program storage device of claim 69, wherein said change in membership of said network group is in response to a change in status of an adapter associated with said network group.

71. At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of determining a group of reachable nodes of a communications environment, said communications environment including a plurality of nodes, wherein each node of at least a subset of the plurality of nodes is coupled to a plurality of networks, said method comprising:

detecting a status change of a network adapter of a network of said plurality of networks;

performing an action, in response to the status change, that affects a network group associated with the network; and

determining, in response to affecting the network group, membership in a group of reachable nodes.

72. The at least one program storage device of claim 71, wherein said performing an action comprises having a process of a node coupled to the network adapter with the status change join or leave the network group.

73. The at least one program storage device of claim 71, wherein said determining comprises ascertaining, by each node of one or more nodes of said communications environment, whether said node is to be a member of said group.

74. The at least one program storage device of claim 73, wherein said ascertaining comprises:

determining a network of said plurality of networks having a largest set of nodes that can communicate with one another via that network; and

determining a status of a component associated with the network determined to have a largest set of nodes, wherein the ascertaining of whether the node is to be a member of the group is based at least in part on the status.

75. The at least one program storage device of claim 74, wherein said component comprises an adapter of said node.

76. The at least one program storage device of claim 75, wherein said node is to be a member of said group of reachable nodes when said adapter has an up status.

77. The at least one program storage device of claim 74, wherein the one or more ascertaining nodes comprises one or more nodes notified of the affect on the network group.

78. The at least one program storage device of claim 71, wherein the group of reachable nodes comprises a largest set of reachable nodes that can communicate with one another via a same network.

79. The at least one program storage device of claim 71, wherein said method further comprises providing to one or more nodes of said communications environment a globally consistent view of said group of reachable nodes.

PROVISIONAL DRAFT

80. At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of providing a desired group of nodes of a communications environment, said communications environment comprising a plurality of nodes, wherein each node of at least a subset of said plurality of nodes is coupled to a plurality of networks, and wherein said method comprises:

determining a group of one or more nodes of said communications environment, said group representing a network of said plurality of networks having a largest number of nodes that can communicate with one another via the network relative to one or more other networks of said plurality of networks; and

providing a globally consistent view of said group.

81. The at least one program storage device of claim 80, wherein said providing comprises providing said globally consistent view to one or more nodes of said communications environment indicating a desire to be notified of one or more changes to said group.

82. The at least one program storage device of claim 80, wherein said determining is performed in response to a predefined event.

83. The at least one program storage device of claim 82, wherein said predefined event includes a change in membership of a network group of said communications environment.

84. The at least one program storage device of claim 83, wherein said change in membership of said network group is in response to a change in status of an adapter associated with said network group.

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